Science Opens the Way to Make Our Children Giants

The New "Elixir of Growth" Which Develops Gigantic Plants and Promises Part of H. G. Wells' Fantastic Dream of a Race of Supermen and Superwomen---But Which Won't Make the World Very Comfortable for Average-Sized People

What Could Happen If Insects Were Developed to the Size of This Giant Caterpillar as Large as the Woman It Is Shown Attacking.

"There were giants in the earth in those days."
—*Genesis, 6:4.*

BY gaining control of quantities of these substances, the experimenter is going to be able to make any kind of man he wants. The biologist of the future will have controls within his grasp that can produce the superman and superwoman."

This statement the other day by Dr. Arthur C. Parker, of the Rochester, N. Y., Museum of Arts and Sciences, is authoritative indication that another of the fantastic prophesies of the imaginative writer, H. G. Wells, may be fulfilled.

In the Wells' novel, "The Food of the Gods," a couple of scientists concoct a synthetic substance called "boomfood" which makes people grow to be forty feet tall and has a corresponding effect on all other animal life, as well as vegetation.

Some of it was spilled, and it made rats grow as big as ponies and wasps so big that they droned around like airplanes and had to be hunted down with shotguns. Eels as big as boa constrictors came out of the rivers and killed sheep, and a plague of huge flies, spiders, ants and cockroaches threatened to overrun the earth. Thistles and weeds, as tall as fir trees, and mushrooms and puff balls the size of haystacks played havoc with farm lands. It could even produce monstrous caterpillars that would plunge right out of bushes and attack human beings.

A new "elixir of growth," called colchicine, just announced by Dr. A. F. Blakeslee, geneticist of the Carnegie Institution's biological laboratory at Woods Hole, Massachusetts, may never cause any such horrors as that, but it has quite as remarkable possibilities. Made from a yellow powder that comes from the seed of a species of autumn crocus or yellow saffron, it makes plants grow many times bigger and stronger than ever before. No one imagines that colchicine will have the same effects on animals that it has on plants but other substances exist to make animals grow in similar extreme ways. Some of these are gland chemicals which biologists still do not know how to use, but someday they may know.

It is obvious, however, that any sudden and radical change in the size of plants, animals and humans might present many disturbing problems such as some of those described by Mr. Wells in his novel, and anticipating what might happen if the "elixir of growth" is not properly handled, Dr. Parker has uttered the following solemn warning:

"Unless mankind soon learns how to know itself and master itself, its knowledge of the universe and its mastery of energies may in the end contribute to the destruction of all humanity instead of its elevation."

With colchicine farmers might grow wheat as tall as pine trees, but if they did they would have to raise their sons on the same stuff, or there wouldn't be anybody big enough and strong enough to harvest the crop.

A couple of forty-foot sons might be useful on a farm, but the way things are now, they would undoubtedly be an expensive luxury. They would have to have a special house of their own, as big as a municipal auditorium, with beds the size of barges. It would take the entire output of a fair-sized textile mill to keep them supplied with clothes, and the mother who kept their socks darned wouldn't have much time for anything else. Their food would have to be cooked in vats as large as water tanks.

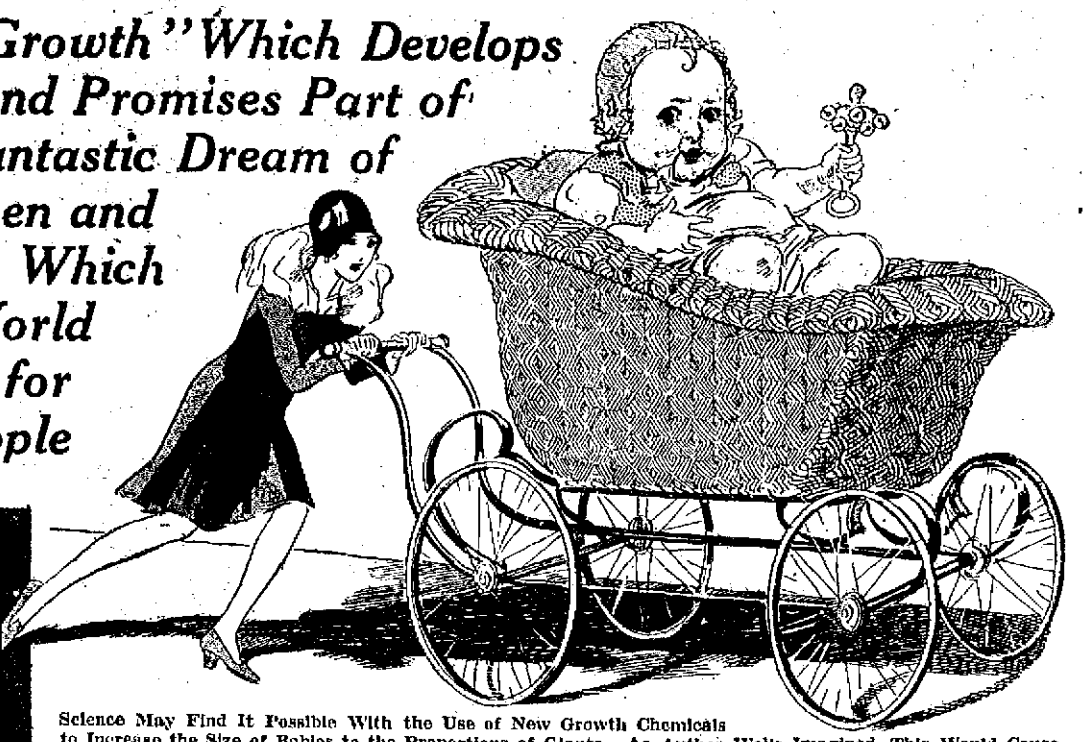
As they strode across the fields, every footprint they left would be a crater about three feet deep, and that would make the countryside impassable for ordinary people, unless the giants stopped after every step and filled the holes.

Of course, they would have to keep off the roads and highways. If they didn't, the results would be tragic, just as they were in Mr. Wells' novel when a farmer lad who had been raised on "boomfood" set out to see London and finally had to be shot by the riot squad because every time he put his foot down he was liable to crush people.

One of the scientists in Mr. Wells' story started feeding "boomfood" to his son without telling his wife about it, and to say she was surprised over what happened to her baby is putting it mildly. When the baby was six months old he broke down his baby buggy and had to be brought home, bawling, in a milk truck.

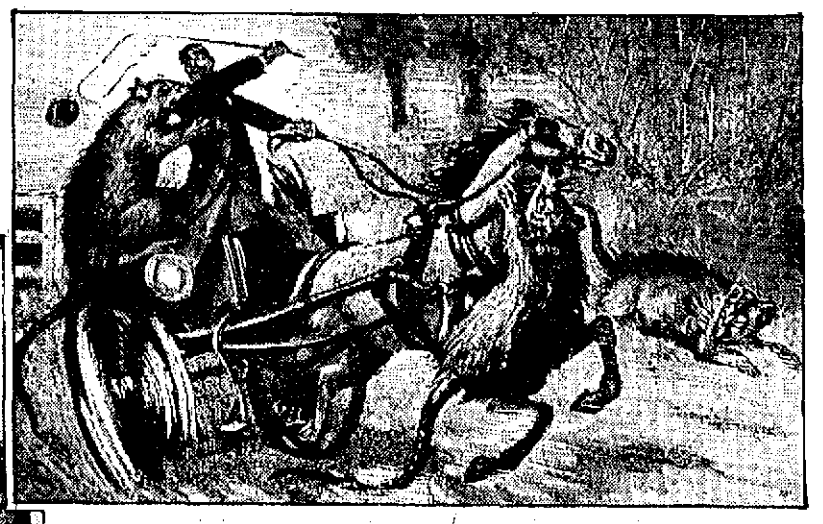
By the time the baby was twelve months old he tottered just one inch under five feet; and his affectionate clutch at the hair and features of visitors became the talk of West Kensington. They had an invalid's chair to carry him up and down to his nursery, and his special nurse, a muscular young person just out of training, used to take him for his airings in an eight horse-power hill-climbing motor perambulator specially made to meet his requirements.

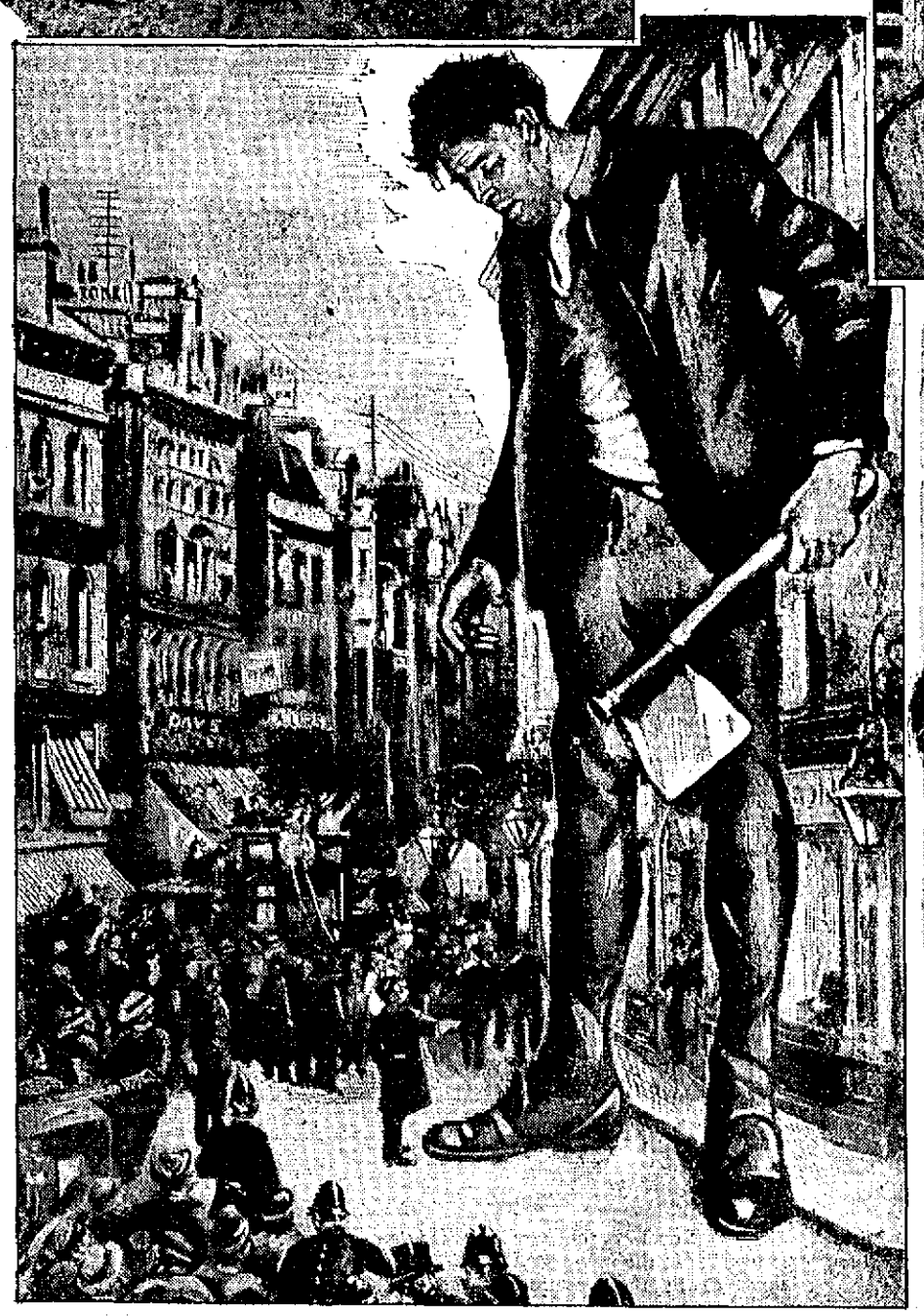
But they had to keep hiring new nurses, because as he crawled around the nursery, smashing furniture, he bit like a horse, pinched like a vice and bawled so loud he just about split the eardrums. When he was half grown he could leap



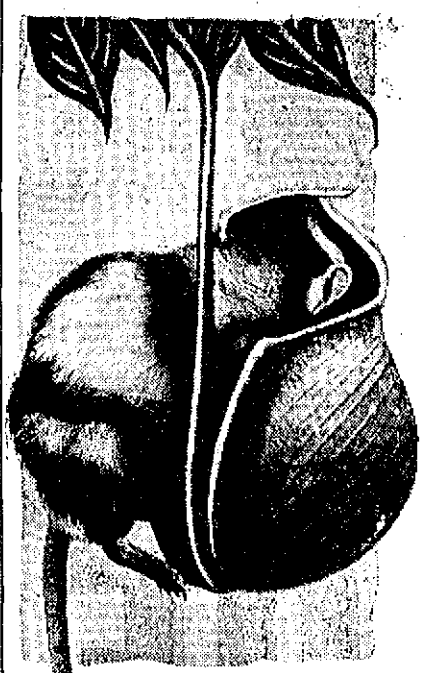
Science May Find It Possible With the Use of New Growth Chemicals to Increase the Size of Babies to the Proportions of Giants. As Author Wells Imagined, This Would Cause Much Embarrassment and Many Living Problems for People Who Retained Their Normal Stature.

On Right, Rats the Size of Ponies Waylaying a Doctor in One of the Episodes of "The Food of the Gods."





Such Effects on Human Growth as Might Be Brought About by Chemicals Were Foreseen by H. G. Wells in His Fantastic Story, "The Food of the Gods," in Which the Giant Farm Boy Pictured Above by the Artist Cyrus Cuneo, Having Grown to an Enormous Height, Causes Consternation by Blocking the Streets of London, and They Had to Shoot Him.



Nature Already Has Produced Giant Vegetation Without Any Help from Science, as Shown by This Meat-Eating Plant Which Has Captured a Mouse.

200 feet and about the only playthings he didn't crush the moment he touched them were cannons.

If some new scientific giant food should ever become as cheap as flour, and if everybody should start buying it and *feeding it to their babies,* the only way to meet the requirements of such a rising and expanding generation would be to make the whole world over, from the cradle to the grave.

First of all, of course, all the homes and apartment houses would have to be torn down and huge ones put up in their place, supplied with bathtubs as big as swimming pools, and everything else on the same scale. But while this was going on, frantic public officials would have to be building new schools in which even the cloak rooms would have to be larger than a waiting room in a railroad station.

Then all the streets and roads would have to be made as wide as an airplane landing field and paved with solid concrete ten feet thick—and that would have to be done in a few short years, too, so they would be ready by the time those lively youngsters started romping to school.

The entire transportation system would have to be replaced by something tremendous. Railroad coaches would have to be as big as factories and automobiles the size of ocean liners. As for all the ocean liners now in existence, they might be saved by ripping out the insides and giving them to the children for rowboats.

And then, when the world had been built over, what would happen to the exhausted fathers and mothers, and the uncles and aunts, of all this mamoth brood? It would be impossible for ordinary people, who would then be little people, to keep out from underfoot, and they would have more trouble accommodating themselves to this big new world than Gulliver did in the land of the Brobdingnags. So they would probably just have to clear out and build new cities for themselves in uninhabited territory—if they could find any.

Mr. Wells didn't get that far in his story. He ends it after only about fifty of these giants had been produced by the "boomfood," and has an army of little people besieging their camp.

Scientists who try the new plant elixir or other "giant makers" on animals will undoubtedly take every possible precaution to prevent any of it from being scattered around indiscriminately, as happened with the "boomfood." But if any considerable quantity should be blown about by the wind, all sorts of distressing things might happen. Already there are carnivorous, or man-eating plants, such as the pitcher plant, which are big enough to devour small animals like the rat—and if some of this new elixir should get to them by accident, a plague of man-eating ones might result.

Any bigger people produced by the elixir would have bigger brains, of course, but that does not mean that their minds would be any better. The size of the brain has nothing to do with the quality of the mind. So what good would it do to use the elixir to grow a race of giants unless there was a corresponding increase in their brain power?

What colchicine does when it comes in contact with the living cells in the seeds of plants is double the number of chromosomes, the infinitesimal particles in the cells that govern growth and heredity. It is composed of chemicals that are much the same as those in the hormones, or glandular secretions in animal bodies, which also control growth and heredity.

Through these chemicals science may at last have a grip on the steering wheel of evolution, and be able to produce at will almost any kind of species, and what is more important, new species that will be able to reproduce themselves—for colchicine is at least one chemical that has an effect on the chromosomes.

New animals sometimes are produced by cross-breeding, like the mule, produced by crossing the horse with the donkey. The mule has some of the good points and also some of the faults of both. With a few generations of selective breeding, the mule might have been further improved until it was a much more valuable animal, except for one handicap—it cannot reproduce itself. But one of the most startling powers of this new elixir is that it gives fertility to infertile hybrids in the vegetable kingdom. Something may be found to do the same thing to animal hybrids such as the mule.

With this elixir, farmers may be able to produce bigger and better crops, and more meat, milk, butter and eggs. But this will also produce more unemployment, and besides it may take eternal vigilance to prevent pests from getting hold of the stuff and "improving" themselves into bigger and better boll weavils and potato bugs.

In "The Food of the Gods," the "boomfood" was only effective from birth until maturity, after which it had no value. There is no time restriction on the new plant elixir.

Among the surprising effects of the new elixir is that of causing an annual plant, blossoming only once a year, to be converted into a perennial, blossoming almost continuously. Presumably, tulips, instead of shooting up like rockets in the Spring and quickly shrivelling, might be induced to keep on going like Roman candles all through the Summer and until the Fall frosts.

In his other writings, Mr. Wells is credited with having foreseen the possibilities that England might be starved into submission by a submarine campaign, long before this came painfully close to happening during the World War. He also wrote an imaginative description of the armored "tank" long before anybody had tried to invent one. And now it seems that his "boomfood" was another one of his fantastic predictions which has come true.